

From pounds to pence: Web GIS boosts savings and service for Welsh borough council.

Client profile

Torfaen County Borough Council

torfaen.gov.uk

- Covering an area of 126 square kilometres, Torfaen is the third smallest borough in Wales.
- The borough council, which has administrative offices at Pontypool, serves approximately 91,000 residents.



Overview

Every summer, as thousands of Velothon participants pedal through Pontypool, thousands more have their eyes on the Torfaen County Borough Council website; its online map has been hailed as the best way to navigate around road closures during the event. But that's just one of the ways Torfaen uses Pitney Bowes Spectrum® Spatial Analyst. Torfaen is leveraging the mobile-ready location intelligence solution from Pitney Bowes to further its goals of creating cleaner, greener communities, improving educational attainment and providing better support for its most vulnerable residents.

Business challenge

At the recent Public Survey Mapping Agreement (PSMA) event in Cardiff, it was evident that councils across Wales are trying to figure out how to transform geographic information systems (GIS) from back-office mapping tools into better business and public-service applications. It's a challenge that GIS Officer Donna Edwards-John and her team at Torfaen County Borough Council have been dealing with for years. The council's internal mapping software, used by more than 700 council employees and partners, was an older system that was no longer well supported, and one had to be at the office in Pontypool to use it. That put it out of reach for highways

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inspectors, public safety officials, social services workers and many others who needed maps while they were out of the office.

Like most councils, Torfaen also strived to provide location-based information through its public website. Putting services on an interactive map helps residents resolve their enquiries faster and reduces the burden on the council’s call centre staff. Facing tight budgets, Torfaen had tried an open-source mapping solution for its website, believing it to be a less costly way to meet the need. However, as Edwards-John and her peers realised, maintaining the open-source tool and loading data into it came at a greater cost than they had expected. “Free GIS or other open source systems are okay if you’re a developer,” she says, “but in local authorities, we are struggling to staff up due to a lack of resources.”

Was it possible, they wondered, to combine both internal and public-facing applications into one flexible system? It would have to be a robust GIS tool, yet be easy for anyone to use, either at a desktop or with a mobile device. It would also have to be available around the clock, without requiring a full-time staff member to maintain it. And, it would have to come in at a lower overall cost to the council.

Solution

It seemed that no single product could meet all their requirements at a reasonable cost, until Edwards-John and her team met with their long-time GIS partner, Pitney Bowes, which introduced them to Spectrum® Spatial Analyst Web GIS software, part of the Spectrum Technology Platform. Pitney Bowes Professional Services Senior Consultant Chris Russell showed the Torfaen GIS team how they could take maps they had already created in Pitney Bowes MapInfo Pro™ software, as well as geospatial data from Ordnance Survey, and deliver that information through a web interface that would be suitable for both GIS and non-GIS users.

With no dedicated GIS developers on staff, Torfaen relied on the Pitney Bowes consultants to install the new software, transfer the data and configure it for Torfaen’s needs. It took the consultants just two days. “I can’t praise Chris highly enough,” Edwards-John says. “Within a couple of hours after he and his team finished setting up the system, we were handling the data ourselves.”

During the setup process, the consultants imported more than 300 data sets into Spectrum Spatial Analyst, which the council can publish at no additional cost. (Other products that Torfaen considered were hosted open-source solutions, one of which charged £1000 per data set for uploads.) Additionally, Edwards-John can freely delegate some of her data management tasks, as Spectrum Spatial Analyst does not restrict data management access to any part of the organization.

With the new system up and running, Torfaen has contracted with Pitney Bowes for regular maintenance, but Edwards-John and her peers capture and upload all new data on their own. Edwards-John illustrates: "I captured trunk roads this morning, and within 30 seconds of clicking the save button, I uploaded them using the uploader tool, and they were published. That's the level of ease I expect."

Benefits

With Spectrum® Spatial Analyst, Torfaen has ushered in a new era of mobility for its officers and for partners such as the Gwent Police and social services agencies, all of whom can access the web GIS application from tablets or smartphones.

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Technical Support Officer Dawn Pinney has seen the improvement that mobile GIS access has made on staff productivity: "Because the inspectors can now access the mapping whilst on site, it frees up the office staff's time. It's also easier for the inspectors, as they can deal with their queries straight away, instead of having to try and get hold of someone in the office. I have seen a big reduction in phone calls to the office."

Phone calls also aren't much help when officers on-site want to see the maps for themselves. Previously, that meant driving back to Pontypool, as Edwards-John explains: "If somebody was at the top of the borough, and they had to come back down to the office, they could be travelling 15 miles just to check one map for road ownership. Even if you take into account the data charges incurred whilst using Spectrum Spatial Analyst, it's costing us pence rather than pounds to get this work done." It's also improving the workdays of highways inspectors such as Julian Lloyd. "It makes my job a lot easier," he says, "without repeated phone calls and trips to the office."

Finally, there are the times when it really isn't a matter of money or convenience, but of meeting an immediate need. "We had a crack appear in one of our roads, and water was gushing out," Edwards-John recalls. "Within minutes of receiving a phone call from a resident, the inspector was out there with her smartphone and could see straight away it was an adopted highway. It was actually a Welsh water main running underneath the road. With that data, she was able to deal with the problem on-site. We never would have been able to do that with the previous system."

Andy Wilson, data, research and participation manager with the council's public services support unit, sums up the improvements: "Spectrum Spatial Analyst is much easier to use than previous platforms, has more functionality, and with mobile access, improves efficiency of time and expense."

Technology used

- Spectrum® Spatial Analyst web GIS application
- MapInfo Pro™ desktop mapping and GIS application

“The considerable increase in usage by both council staff and the public, the positive testimonials and the superb, prompt support by the software provider have all reinforced the organisation's view to remain a loyal customer of Pitney Bowes moving forward.”

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Meeting public demand securely and reliably

Leveraging the same MapInfo and Ordnance Survey maps that serve its officers and partners, Torfaen is providing location-based information to the public through its website. A link from the council's home page takes visitors directly to the [Spectrum® Spatial Analyst map](#), where they can select map layers to display school catchment areas, refuse collection rounds, gritting routes, roadworks, leisure activities and more. The public web client provides access only to the layers appropriate for public use, but visitors can select as many layers as they want to see.

Edwards-John envisions expanding the location-based content for other uses, such as education. “We hold historic maps, aerial photography, and so on,” she says. “I would like to see Spectrum Spatial Analyst going out into the schools. Potentially, we're talking about thousands of more users.”

Whereas previously, Edwards-John worried about the availability of Torfaen's mapping system, even for emergency services, she is now confident that Spectrum Spatial Analyst will be able to scale to meet many more public service needs. “Spectrum Spatial Analyst is head and shoulders above everything else,” she says, “and the support we've got from Pitney Bowes is second to none.”

It's often difficult to be an early adopter of new technology, but Edwards-John is glad that Torfaen deployed Spectrum Spatial Analyst when they did, as it will make it easier for the council to handle changes in local governance. For example, starting in 2018, the Gwent police won't be enforcing traffic regulation orders; it will be left in the hands of the local authorities in the county, who will need to assign the duty to one of their own officers or outsource it. “In Torfaen, we already have all our traffic regulation orders mapped,” Edwards-John says, “and it's going to be available on SSA for the officers, the inspectors and others who need it. We're going to be ahead of the game, really.”

Wilson agrees: “The considerable increase in usage by both council staff and the public, the positive testimonials and the superb, prompt support by the software provider have all reinforced the organisation's view to remain a loyal customer of Pitney Bowes moving forward.”



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